

## BROMELIADS, PART FOUR

### Potting Mediums and Houseplant Features

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If an interesting and "different sort" of houseplant is desired, consider bromeliads. More frequently cultivated in European households, perhaps the answer to their lack of popularity in the States lies in the fact that we don't know how to grow them. Often when tubular Vreisia or tufted Tillandsia are offered for retail sale, they are drowning in a vermiculite and soil mix, or frying on a dry slab of Happuu.

It has been aptly put that the worst choice for bromeliads, other than the terrestrial species, is soil. This extends to include vermiculite, which when crushed tends to remain soggy, without air pores. Prime consideration must be given to rapid drainage and good aeration of the medium. Almost any material may be used, provided it is not alkaline—sphagnum peat moss (up to 50% may be used), charcoal, perlite, fir bark, tree-fern fiber (Happuu), redwood hair, osmunda fiber and sand grits are all acceptable. To this should be added a small part of leafmold, bark chips or coconut husks (Wilson and Wilson 1963). Crock bits should cover the bottom 1 or 2 inches. When pots are filled, consideration should be taken as to how much the mixture will settle after it is watered and the technique and expertise of whomever will be watering the plants. It may be better to fill the pots a little too much so as to avoid overwatering. The mix should be dampened before use and packed just enough to keep the plant firm. Guzmania, Nidularium and Tillandsia may be grown in straight peat after the roots have been balled with osmunda (Wilson and Wilson 1963).

Desert types enjoy a  $1/3$  peat,  $1/3$  sand and  $1/3$  loam mixture to which a little leaf mold has been added. The epiphytics assume the terrestrial habit quite nicely when grown in a lighter medium. Happuu slabs are also mounted with epiphytes in the same manner as Tillandsia and others are mounted on driftwood. The roots are wrapped in sphagnum with a soft wire securing the plant until "holdfasts" take over. Bromels grown in this manner or as single decorative items stuck in carved-out Happuu must be misted or hosed daily.

Another reason for the lag of popular enthusiasm over bromels may simply be ignorance on the part of the buyer. People like what they know. Perhaps a display explaining

culture and portraying the fascinating biology of the group would aid in education. The unique physiology and morphology inherent in absorptive scales may be sufficient to lure the fancy of anyone who has read about them.

Being subtropical and tropical American natives, bromeliads are found in diverse situations such as perched atop skyscraper trees of the rain forest, growing on cacti, draped over mossy limbs in lush forests, clinging to rocks on mountainsides, amongst orchids in "caatinga" scrubland on the Brazilian plain, in acid litter and limestone cliffs. Providing homes for algae and mosquitos, the rosette similarly caters to such vagabonds as Utricularia and tree frogs. Bromeliads surely occupy a unique niche in the plant kingdom. Often moisture and nutriment are restricted to that which runs down tree trunks or is deposited in the form of guano, or other decaying organic matter which may be first worked upon by bacteria, fungi and lower forms of life.

Among characteristics championing the cause of bromels as houseplants is included the upright nature of growth which allows confinement to one pot until enough pups are produced to warrant severing from the decaying mother. In addition, many forms of vase and shape may be tried. Two small plants, the bulbous Tillandsia ionantha and star-shaped Cryptanthus sp., are good beginners' items. Others with tubular shapes have been used as vases by floral designers. For the more ambitious, tufted Tillandsias, cascading beauties such as Acanthostachys strobilaceae and Billbergia zebrina, with their pendant spikes may be tried. The curlicue, dangling leaves of Tillandsia streptophylla would be a handsome piece of interior sculpture if properly placed.

From the standpoint of color, bromeliads make spectacular focal points. Scribbles of maroon on bright yellow-green make the mottled plant, Aechmea 'Bert' one of the most vivid exotics. The "red lips" of Neoregelia Carolinae appear before the flower while Guzmania gloriosa displays red outer leaf markings. Spotted and reticulate foliage patterns may be selected by name. The foliage of some species changes color, as exemplified by Tillandsia ionantha which is first gray-green and later pink. The display of exotic form together with the coloration may offer enough to the customer for merit as a foliage plant alone.

Midgets, medium sized, and immense sizes suited only to outdoor culture occur. Even more variety is provided by differences inherent in xerophytic and hydrophytic types. Terrestrial xerophytics would probably be grown in pots as succulents, while air-plants may be displayed in bathrooms, above sinks and even utilized in terrariums. Larger epiphytes may be

placed with a light mix in Happuu monkeys or mounted on driftwood trees and fern slabs like their xerophytic counterparts.

Although most bromeliads retain the individual flowers for only one or two days, the inflorescence is long lived, blooming continuously for periods of two to seven weeks (Padilla 1973). The flowers often rise on a peduncle, but may be stalkless as with Neoregelia and Cryptanthus and appear honeycomb-like at the base of the rosette. The many-flowered inflorescences are often multicolored as evidenced by the cascade of blue, green and rose produced by Billbergia nutans. Taken together, the true flowers and bracts exhibit almost any color imaginable, including black as in Aechmea lamarchei. The genus Aechmea deserves special mention for the endless variety inherent in the more than 150 species, many of which are among the best choices for home growth. Subtended by a stout stalk, flowers are found nestled among showy bracts. These bracts maintain their brilliance during the whole cycle of flowering and fruiting (Wilson and Wilson 1963) while remaining stately above the green and silvery rosette. In other species of Aechmea, Billbergia, and others of the Bromelioideae, the berries appear jewel-like. They are often hard to distinguish from the berry-like flowers, as seen with Aechmea miniata var. discolor. Here a sky-blue center is encased by contrasting orange-red bracts exhibiting succulence which one would hardly conceive of in a flower. The flower of Aechmea penduliflora exhibits a red base, green middle and yellow tip. The berry of A. angustifolia changes from white to blue while still on the infructescence. (Wilson and Wilson 1963)

For long-term maintenance of bromeliads as good specimen houseplants, it has been mentioned that humidity and ventilation must be provided. Artificial light may likewise be considered if good window space becomes scarce. "Optima", "Vita-Lite" and "Naturalescent" are fluorescent bulbs which simulate the sun's visible light spectrum more exactly than any presently on the market, and are sworn to by many bromel experts (Milstein 1971). However, controlled experimentation with bromeliads has not been documented and conclusive evidence is unavailable as regards optimal utilization of light from these sources. Incandescent and fluorescent combinations have been used. A 50-50 mixture of "daylight" and "natural white" fluorescent light has been suggested (Cherry 1969) which is said to result in satisfactory intensities in all spectra (See Connecticut Greenhouse Newsletter No. 60, July 1974). With an automatic timer providing light and a full rosette tank, the owner can take a week's vacation free from worry about his little "beasties".



## Bibliography

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